

Our apple trees, like many fruit trees, are propagated by grafting: joining a scion (which becomes the fruiting part, or top of the tree) to a rootstock (which becomes the root of the tree.) This grafting allows the two parts to grow together and function as a single plant. Although the rootstock has an influence on the ultimate size and hardiness of the tree, the scion alone determines what kind of fruit the tree will yield. Therefore, when we produce fruit trees for northern climates, there are two things to consider:

1) which rootstock to use 2) which "cultivars" (cultivated varieties) to graft onto that rootstock. Both must be hardy and vigorous enough to withstand the lowest winter temperatures and grow strongly during a short season.

**Rootstock.** The rootstock determines the ultimate size of the tree. Generally, there are "standard," "dwarf" and "semi-dwarf" rootstocks. Choosing one or the other of these rootstocks does not influence the type of fruit yielded by a tree, but for Northern growers it can have a huge effect on how winter-hardy the tree is, how well it grows, and whether it produces a crop. "Dwarf" trees are made by grafting onto rootstocks that are inherently weak growers; they stunt the growth of the tree. There is a popular notion that dwarf trees will produce fruit sooner, but in USDA Zone 3 or 4, the use of a dwarfing rootstock can cause even a hardy cultivar to winterkill or to simply linger season after season with minimal growth and no fruit. If you live in a northern climate with a short growing season, dwarf trees will not work for you. You need a rootstock that will grow strongly for 2-3 months and then start hardening off for winter. **We do not grow or sell dwarf or semi-dwarf apple trees, because they do not have the hardiness, vigor, and disease resistance needed to thrive in our northern climate.** For our apple trees we use the Russian rootstock *Antonovka*, an extremely hardy and vigorous "standard" size rootstock which can produce strong growth during our limited growing season. "Standard" means only that *Antonovka* is not a dwarfing rootstock; it will not limit the growth and thus the ultimate size of the tree, but rather will allow it to grow freely to its full size, about 12-15 feet. For growers in Zones 3 and 4, an apple on *Antonovka* "standard" rootstock will be much hardier, grow more vigorously, and bear fruit sooner and in greater quantity than the same apple on dwarfing rootstock. If you wish a smaller tree, this can be accomplished by pruning. A well-pruned apple tree on *Antonovka* rootstock, when grown in Zones 3-5, will be equivalent to a "semi-dwarf" tree in size (10-12 feet at maturity), and it will have many advantages. For instance, your tree will have the vigor to compete with grass that grows near the base of the tree, while a dwarf tree must have "clean culture" (no sod) to the drip line. It will not need to be guyed or staked, whereas dwarf trees tend to be shallow-rooted and usually require some support. Your tree might well be producing fruit for your great-grandchildren, while dwarf trees must be replanted every 10-20 years. Finally, the crop yielded by your mature standard tree will be many times greater than that of a dwarf or semidwarf tree.

**Cultivars.** In the apple table on pages 5-12, we list over 170 varieties of apples that can be grown in our climate. The hardiness ratings (from hardest to least hardy: E-V-M-P) in the table can help narrow the choice for those in colder areas. Or, consider one or more of the special price packages or "our picks" listed at the top of the page 5.

**CHOOSING A SITE FOR YOUR APPLE TREES**

Apples like light, fertile soils and a south-facing slope if available. Your trees will grow faster on a well drained, sandy loam soil. They will not grow at all in wet, heavy clay or pure sand. Another consideration is proximity to your dwelling, especially for fruit trees, which require care every year. Will it be "out of sight, out of mind?"

**Be sure that water can be provided at the site.** Each tree should receive 5 to 10 gal. of water per day until the end of May, and the same amount at least two to three times per week until mid-July (August in a dry year.)

**Planting.** Get your trees in the ground as soon as you can. Have the holes dug before the trees arrive if possible. For details on planting, see our Planting Guide: [<http://www.sln.potsdam.ny.us/pg.html>] or hard copy by mail on p. 34. A free copy will be sent with your plant order.

**Spacing.** Plant your apple trees 25 feet apart if they are to be kept well-pruned, 35 feet if they will be allowed to grow to full size.

**Apple pollination.** Most of the apple cultivars that we offer are self-fruitful, i.e. they do not need to be planted near a different variety of apple to produce fruit. However, since even self-fruitful varieties can often produce better crops with cross-pollination, we recommend that the backyard gardener plant more than one apple variety in his/her orchard location.

**How long before it fruits?** An apple tree from our nursery, planted in good soil, and maintained adequately by its new owner (rabbit protection, pruning, mulching with manure, attention to pest problems) can be expected to bear its first fruit in 3-5 years.

**DR(sfr) Disease Resistance:**

In the "code" column of the apple listing on pp. 5-12, you will see some apples tagged "DR" with the subscript "s" (scab), "f" (fireblight), or "r" (cedar apple rust). These are apples which are less susceptible (but not immune) to these diseases.

However, don't pass over a variety simply because it is not a "DR." "DR" does not mean "no spray" or "low maintenance." Insects like disease resistant trees as well as "normal" trees. Choose your trees first for vigor and fruit quality, second for disease resistance.

Keeping your tree healthy will help it fend off disease. Conversely, any tree that is under stress will be more likely to fall prey to disease, whether or not it is genetically disease resistant.

**Code:**

- a-notably annual bearer (this does not mean other cultivars will not bear annually)
- b-baking
- c-cider
- e-eating
- f-ornamental flowers
- g-jelly
- j-juicy
- k-keeper
- l-large fruit
- o-aromatic
- p-productive
- r-ripens over long season
- s-sauce
- u-unusual flavor
- v-vigorous
- y-bears young
- \$-sells well at market stands

**Hardiness:**

- E—Extremely hardy, to -50°F or colder.
- V—Very hardy, to -50°F with occasional winter injury.
- M—Moderately hardy, to -40°F with occasional winter injury.
- P—May need extra protection. Hardy only to -30° or -40° F.

**Season:** This refers to season of ripening and will vary with location. For instance, Yellow Transparent, which ripens here around Aug 1st, is ripe approximately one month later in Anchorage, AK. Our seasons in Potsdam may be roughly defined as:  
**Early**—end of July thru mid-Aug  
**Mid**—end of August thru Sept  
**Late**—First week of Oct and later

# Raintree Nursery Rootstock

## A WORD ABOUT ROOTSTOCKS

We make virus free rootstock available to the backyard grower who wishes to start his or her own trees.

The choice of rootstock has much to do with tree performance. The rootstock is the major factor in determining the size of the tree, its cold hardiness and tolerance of wet or dry conditions. It helps determine how soon the tree will bear and some of the diseases to which it will be resistant. Raintree offers fruit trees grown on superior dwarfing rootstocks. The following rootstock information will also help you understand more about successfully caring for your Raintree fruit trees. Remember that with any rootstock, the ultimate height of the tree depends not only on the rootstock but on the variety grafted, the type of soil and the methods of pruning and care. You may graft on to patented rootstocks but may not reproduce the rootstock itself.

## ROOTSTOCKS SENT IN FEBRUARY

Despite our best efforts to have them ready earlier, it is always February, sometimes early March, before we can send you the rootstocks. They may therefore be sent separately from the rest of your order.

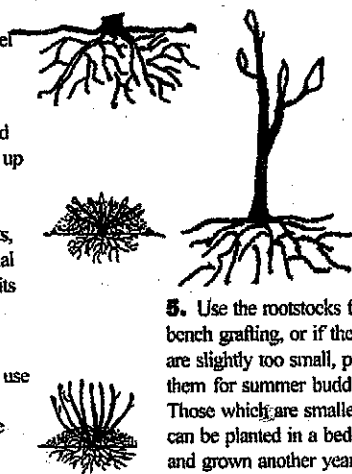
Attend our **Starting Your Own** (Stooling or mound layering for apples, plums and cherries) grafting classes. See Page 93 for details.

1. Plant the rootstock in your garden one foot apart. Let it grow through the season.

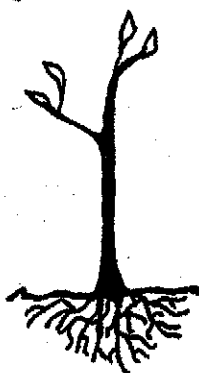
2. Cut it off at ground level the following spring.

3. During the next (and each following) spring and early summer it will send up shoots. Every couple of weeks, hill up sawdust or dirt around the new shoots, always leaving the terminal bud exposed to continue its growth. Sawdust is preferred.

4. The following winter, use your hands to pull the sawdust away. Cut off the now rooted shoots at the base of the mother plant.



5. Use the rootstocks for bench grafting, or if they are slightly too small, plant them for summer budding. Those which are smaller can be planted in a bed and grown another year.



## PLANTING YOUR GRAFTED ROOTSTOCK

Plant your grafted tree so that the graft is, if possible, only a couple of inches above the ground. This will help avoid the burr knots that sometimes form on the EMLA 26 and EMLA 7 rootstocks. If however, you need to graft higher on the rootstock to match the size of scion and rootstock this is also okay. It is often best to plant the grafted rootstock in a garden or easy to care for area, spaced about 18 inches apart for one or two years before planting the tree into your orchard. Use your fingers or pruners to keep any buds from growing below the graft union. Choose only one vigorous branch to tie up to start your new trunk and prune off any other branches that start to grow.

## TIPS ON GRAFTING ROOTSTOCKS

**How to collect scionwood:** Cut pencil size (1/4" diameter) wood when the tree is dormant (Dec-Feb.) Select only last years new healthy growth. It's at the end of branches and has flat vegetative buds not plump fruit buds.

**Storing the scionwood:** You need pieces only 4 to 6" long for grafting. However you can store pieces a foot long or more. Label each variety. A piece of masking tape and magic marker works well. Dip the wood in a solution of one tablespoon clorox to one gallon of water and dry off. Place the scionwood in a plastic bag. Wet a paper towel and wring it out. Put it in the bag with the scionwood and seal. Keep refrigerated until you graft.

## APPLE

### EMLA 27

Can be maintained at only four to six feet in height. It is well suited for growing in a container or a small yard. Trees grafted on EMLA 27 bear early and heavily. It needs staking. It is hardy to -25° F. This rootstock is patented and it may not be reproduced without permission of the patent holder. #R020

### BUDAGOVSKY 9

A very dwarfing apple rootstock similiar to EMLA 9 but more hardy. Trees can be maintained at 6 to 10' in height. Requires staking. USDA Zones 3-9. #R280

### EMLA 26

It will produce a dwarf tree from 8-14 feet tall. Does well in most soils. It is hardy to -40° F. Produces fruit in 2-3 years. Can be grown free standing but needs staking on windy sites. It doesn't sucker much in the orchard. #R060

### EMLA 7

Produces a semidwarf tree from 11-16 feet tall. Trees can begin bearing in 3-4 years. It is hardy to -35° F. and does well on wet soils. Suckers need to be removed each year. #R100

### MM 111

Produces a semi-standard heavy bearing, precocious, well anchored tree about 20 feet tall. This rootstock has fibrous roots and does well in a wide variety of soils. It is hardy to -35° F. It produces burr knots at the base and should be planted almost up to the graft line. #R110

### ANTONAVKA

A Russian suckerless rootstock that produces a full-size, 25' to 35' tree. Hardy to -50° F. Wide soil adaptability. Produces large yellow edible apples if allowed to fruit. #R055

[www.denaliseed.com](http://www.denaliseed.com)

[www.iohnnvseeds.com](http://www.iohnnvseeds.com)

[www.seedrack.com](http://www.seedrack.com)

[www.sheffields.com](http://www.sheffields.com)

[www.uaf.edu/ces](http://www.uaf.edu/ces)

[www.arborday.org](http://www.arborday.org)

[www.dnr.state.ak.us/forestry](http://www.dnr.state.ak.us/forestry)

[www.treesaregood.com](http://www.treesaregood.com)

[www.apfga.org/research.html](http://www.apfga.org/research.html)

[www.isa-arbor.com](http://www.isa-arbor.com)

## RAMBLINGS

**HISTORY** - homesteaders - Marin Anderson's parents (sweet cherry & apples) in 1940's - raspberries homestead variety - other - my start in early 1970's

**HIGH TUNNEL & equivalent** - Reeds - Mike Readon (Jim Manley) - Jessie Nelson - Norman Lowell Smith - others

**CONES** and other warming devices - clear, not black plastic - south slope - against buildings - rocks - wind protection

**EXPERIMENTING** - try something new each year - my many failures include 7 varieties of sweet cherries & 4 other pie or sour cherries - 4 or 5 varieties of plums - apricots - peach - nectarines - nut trees (walnut & hickory - maples - weeping willow - grapes - other varieties of strawberries - blueberries - etc

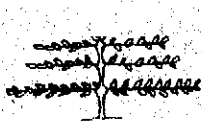
**LEARNING** from others - John Bitner's don't try to reinvent the wheel!!

### ESPALIER - when you have limited space

#### **ESPALIERS**

"Espalier" refers to special practices for training trees onto trellises. There are many ways to make your trees into works of art, and the trees we offer have already been trained along the same plane in a 3-tier, T-shape, horizontal cordon. As you continue the training, you can shape trees into any of the designs seen in the drawings. Beautiful when grown against a wall, a building or on an existing fence or wires, trees should be spaced an average of 8-10' apart. Branches are at about 1-1/2, 2-1/2 and 3-1/2 feet.

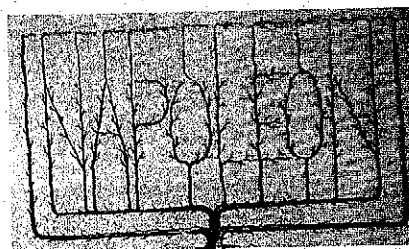
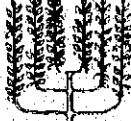
#### **THREE TRADITIONAL ESPALIER PATTERNS**



Our T-shaped Cordon (3 tiers)



Our T-shape cordon can be trained to look like these drawings.



Your espalier may not look as good, but you'll be in a lot less trouble than Napoleon's gardener if you mess up!

LOCAL SEASON for fruiting (days)	SHORT	LONG	AVERAGE
Parkland and Norland apples	90	107	94
Montmorency Cherry	80	98	90
Kristen Sweet Cherry (on Bali)	90	97	93
Bali (Evans) Cherry (not recommended)	96	118	108

## TREE HEALTH

Healthy trees produce good quality fruit. Weak or diseased trees produce fruit of poor quality or no fruit at all.

Pest problems involving insects and diseases if not detected early and managed properly can influence fruit production and weaken a fruit tree's overall health.

### Bearing Age

Most fruit trees are propagated by grafting or budding the variety on a root stock. When you purchase nursery-grown trees, their tops will be one to two years old while the roots may be one or two years older. The age (from planting) when trees can be expected to bear fruit depends on the type of fruit you are growing: apple, apricot and sour cherry (three to five years), peach (two to four), pear and plum (four to six), quince and sweet cherry (five to seven). Dwarf fruit trees may begin to bear one to two years earlier than standard sized trees.

## CLIMATE AND WEATHER

Most hardy fruit trees need a certain amount of cold winter weather to end their dormancy and to promote spring growth. When winters are too mild, spring growth is delayed, irregular, and slow. These factors extend the period of blooming, thereby increasing the possibility of frost injury.

On the other hand, extreme cold during winter dormancy may kill the fruit buds. Winter weather rarely threatens hardy apple, pear, plum, and sour cherry varieties. Sweet cherry trees, however, are relatively sensitive to cold until they become dormant. Peach trees are very vulnerable to cold weather. Their buds can be killed by midwinter temperatures around  $-10^{\circ}\text{F}$ .

As the fruit buds grow and open, they become more susceptible to injury from frost. The exposed buds can usually withstand temperatures near  $24^{\circ}\text{F}$ . However, the open blossoms of practically all fruit trees may be killed if the temperature drops below  $27^{\circ}\text{F}$ .

When a heavy frost is expected, covering the trees will sometimes prevent bud or blossom injury, provided temperatures do not fall too low and the cold weather is of short duration. Protective coverings may be effective, such as floating row cover material or old bedsheets.

During spring frosts, some commercial growers heat their orchards, but this method is impractical for home gardeners. Overhead irrigation provides effective frost protection when temperatures drop to  $32^{\circ}\text{F}$ . Ice that forms on buds provides an insulating effect until temperatures rise above freezing. After a severe frost, injured blossoms may appear normal; however, if the pistils (center part of the blossoms) are killed, the tree will not bear fruit.

## POLLINATION

Most fruit trees need to be pollinated. Pollination is affected by cold weather and reduced pollinating insect activity. Without sufficient pollination, trees may blossom abundantly but will not bear fruit.

Some species of fruit trees have "perfect" flowers. Both the anthers, which contain pollen, and the pistils, which develop into fruit, are located in the same blossom. Trees that bear fruit through self-pollination, or set fruit without pollination, are called "self-fruitful."

(over)

6.

However, many types of fruit trees that have perfect flowers cannot produce fruit from their own pollen. These require pollen from another variety and are called "self-unfruitful".

Some species of fruit trees do not fit conveniently into either category. Persimmons and dates have male trees that produce pollen and female trees that produce fruit. To grow them successfully, it is necessary to plant at least one tree of each gender near each other.

Almost all citrus trees are "self-fruitful." Other self-fruitful types include quinces, sour cherries, apricots (except Perfection and Riland), figs (except the Smyrna type grown in California), peaches (except the J.H. Hale and a few others), and European-type plums such as the Stanley, Green Gage, and Italian-prune.

"Self-unfruitful" types include most apple, pear, sweet cherry, and Japanese and American plum trees. To pollinate adequately, plant two or more varieties near each other. The following planting practices are recommended:

**Apple.** Plant at least two varieties of apple trees near one another. Golden Delicious, a self-fruitful type, is one of the few exceptions to this rule. Poor pollen-producing types, such as Gravenstein, Jonagold, Stayman, and Winesap, need to be planted with at least two other varieties to insure adequate pollination.

**Sweet Cherry.** Bing, Lambert, and Napoleon (Royal Ann) cherry trees do not pollinate one another. Plant a pollinating variety such as Black Tartarian or Republican, Stella, Van, or a sour cherry such as Montmorency nearby.

**Pear.** Many varieties of pears are completely or partially self-unfruitful. For adequate pollination, plant at least two varieties together. Note: Bartlett and Seckel pears will not pollinate each other, and Magness cannot be used as a pollinator.

**Plum.** Since most varieties of Japanese and American plums are self-unfruitful, plant two or more varieties together.

### BIENNIAL BEARING

Occasionally, certain fruit trees such as apples bear heavily one year and sparsely the next. This is called "biennial bearing." The spring-flowering buds of most hardy fruit trees have actually been formed during the previous summer. Therefore, an especially heavy crop one year may prevent adequate bud formation for the following year.

Biennial bearing is difficult to alter or correct. However, you can induce a return to normal yearly fruit production by early and heavy thinning during the year in which the trees are producing their large yield.

About 30 to 40 healthy leaves per single fruit are needed to produce good quality. Within 30 days after bloom, thin remaining fruit to leave a single fruit every 6 to 8 inches along the branches.

### CULTURAL PRACTICES

Fruit trees need full sunlight for best production. Avoid placing fruit trees where they will be shaded by buildings or by other trees. Leave adequate space for fruit tree root systems by planting away from shade or forest trees.

A good watering and fertility program is also essential to maintaining a tree's vigor and fruiting capability at its best. Water fruit trees deeply but at infrequent intervals. Do not over fertilize, especially with nitrogen.

## FRUIT TREES IN GENERAL

1. **LOCATION** - micro climates - protection - moose - wind - birds - rabbits - fencing - clear plastic vs. black - south slope - drainage
2. **PLANTING** - spacing (minimum 15 feet) - hole size - rocks - raised beds
3. **CARE** - watering - fertilizing - weed control - disease control (powdered mildew) - overloading of fruit - use props
4. **TREE SIZES** - dwarf - semi dwarf - full - controlled by rootstock - pruning - watering - fertilizing - soil - etc
5. **PRUNING** - (see handout) - most anytime except late fall and winter - no more than 10% at any one time - topping tree - water sprouts - limb training - spreaders - collar - keep inside of tree open
6. **POLLINATION** - (see handout) - somewhat complicated depending on tree - generally need more than one tree - Montmorency cherries self-fertile
7. **HARVESTING** - bare root trees 3-4 feet tall will produce in 2-4 years - thinning when to pick - taste - start falling on ground - frost - when picking bend apple back toward branch - sunny side produces redness - back and inside ripen later - cherries, cut stem or just pull off seed
8. **STORAGE** - apples do NOT store well - leave stem on - don't stack - don't wash keep cool - can refrigerate up to a month - need high humidity but not wet - Don't store next to potatoes - can wrap individually in newspaper (like tomatoes) - apples and cherries are high in antioxidants
9. **PRESERVING** - another whole topic - check with extension agent in Soldotna
10. **SOURCES** - local nursery - Save U More - big box stores like Costco & Home Depot - Internet (but be careful!) I recommend - Raintree Nursery (raintreenursery.com) and St Lawrence Nursery (sln.Potsdam.ny.us). Beware of nurseries in the southern and central U.S.  
Make use of google etc for information - it's amazing what's available. Alaska Pioneer Fruit Growers Association in Anchorage (apfga.org) - they list 130 varieties of apples experimented with!! Plus other info

# RAMBLINGS

**HISTORY** - homesteaders - Marin Anderson's parents (sweet cherry & apples) in 1940's - raspberries homestead variety - other - my start in early 1970's

**HIGH TUNNEL & equivalent** - Reeds - Mike Readon (Jim Manley) - Jessie Nelson - Norman Lowell Smith - others

**CONES and other warming devices** - clear, not black plastic - south slope - against buildings - rocks - wind protection

**EXPERIMENTING** - try something new each year - my many failures include 7 varieties of sweet cherries & 4 other pie or sour cherries - 4 or 5 varieties of plums - apricots - peach - nectarines - nut trees (walnut & hickory- maples - weeping willow - grapes - other varieties of strawberries - blueberries - etc

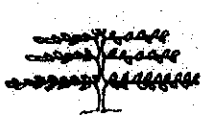
**LEARNING** from others - John Bitner's don't try to reinvent the wheel!!

## ESPALIER - when you have limited space

### **ESPALIERS**

"Espalier" refers to special practices for training trees onto trellises. There are many ways to make your trees into works of art, and the trees we offer have already been trained along the same plane in a 3-tier, T-shape, horizontal cordon. As you continue the training, you can shape trees into any of the designs seen in the drawings. Beautiful when grown against a wall, a building or on an existing fence or wires, trees should be spaced an average of 8-10' apart. Branches are at about 1-1/2, 2-1/2 and 3-1/2 feet.

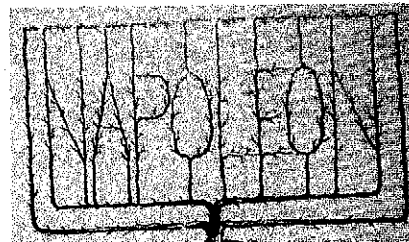
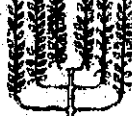
#### **THREE TRADITIONAL ESPALIER PATTERNS**



Our T-shaped Cordon (3 tiers)



Our T-shape cordon can be trained to look like these drawings.



Your espalier may not look as good, but you'll be in a lot less trouble than Napoleon's gardener if you mess up!

LOCAL SEASON for fruiting (days)	SHORT	LONG	AVERAGE
Parkland and Norland apples	90	107	94
Montmorency Cherry	80	98	90
Kristen Sweet Cherry (on Bali)	90	97	93
Bali (Evans) Cherry (not recommended)	96	118	108



# A SUMMARY OF 60+ YEARS OF AN ALASKAN ADDITION !

1. Important to keep a journal - record book - don't trust things to memory.
2. The key to success is giving plants a good start.
3. Try at least one or two new things every year.
4. Fruit trees - start with Parkland and or Norland apples - Montmorency cherry - get experience or talk with others before expanding.
5. Fruiting trees and berries - why they fail to bear - inadequate pollination bearing age (usually 3-5 years for trees) - unhealthy or wrong variety of tree - frost injured flowers (pistils) - time of bloom , rain, too cool etc - might be biennial bearing - not enough leaves (apples generally need 40 leaves per apple) - inadequate sunlight - severe winter temperatures - generally you need two varieties for pollination of apples.
6. Fruit trees in general - south slope with lots of sun - good drainage - wind protection - seek out micro climates especially above 500 feet elevation.
7. Berries - strawberries - red & golden raspberries - red & black currants - gooseberries - Saskatoon or service berries -blueberries are marginal.
8. I never fertilize or water an established lawn (leave clipping for fertilizer) grass may turn brown and go dormant during dry spells but will come back - grass around trees robs nutrients.
9. Oats, barley and wheat will usually mature when seeded directly early.
10. Transplant coles and onions thru slits in black plastic to control cut worm and weeds (will attract slugs later in fall) .
11. Plastic - black for weed control - clear for warmth - red plastic has done nothing for me.
12. Plant some flowers in your vegetable garden for color and variation.
13. Rhubarb - cover for awhile in early spring to give it a head start.
14. Killing frost - 30 year average is Sept.26 - earliest was Sept. 14 and the latest Oct. 11 (based on dying back of squash leaves).
15. Tart or pie cherries beat other fruits for antioxidants - also as a sleep aid.
16. Onions - bend over tops before Aug. rains & keep dry to prevent rot.
17. Make a to-do list for the following year.
18. Elevations above 500-600 - seek out experienced growers - as an example, raspberries usually will not mature - but maybe wild ones.
19. Till in fall to get rid of some slug eggs.
20. Use flat fiberglass cones for early warmth and wind protection.



21. Raspberries - cut out old canes in the spring - top new canes about head high - no lower as you are cutting off a lot of the fruiting portion - tie up in rows - roots spread out a considerable distance.
22. Use earth boxes especially in the greenhouse - use these, half barrels etc for growing lettuce etc so they are close to the kitchen for quick use
23. Mint does well but can be hard to keep under control.
24. Test you soil occasionally - it pays - take 5-6 samples and mix together.
25. For real early potatoes green sprout & plant under remee in early May - Get golf ball sized by early July - use spot in same way for late crop.
26. 2004, 2005 & 2014 were exceptionally good growing years and 1985-87, 1999 & 2008-09 were very bad years - don't get lulled into thinking they were the norm. We seem to have quite extreme years in Homer.
27. Suggested flowers to keep track of first bloom date - peonies - crocus - himalayan and other poppies - tulip - lilac - that you grow each and every year (phenology)
28. Himalayan blue poppies & peonies are easily divided in the spring from established plants - just cut a portion off with a sharp spade.
29. Sprout regular pea seeds before planting them in the early cold ground.
30. Use mothballs around trees, peas, etc for vole control - don't like smell.
31. Watch for rabbit damage to trees - they like apple and other tender bark. cage with wire at least 4 feet high
32. Encourage gardening with your kids - in the early 80's our kids made \$\$ selling vegetables etc right from our home. Kids day at market too.
33. Record rainfall to better control your amount of watering.
34. The biggest failure in starting seeds is damping off - use a good seed germinating mix & clean containers - applying bottom heat really helps and quickens the process - I use the top of our water heater(warm & dark) or heating pad - some seeds need light to germ. but most don't.
35. Blossom end rot in tomatoes - it is a calcium deficiency caused by stress (both to the plant and grower!) such as extreme temperatures, too much nitrogen & uneven watering - using earth boxes has almost completely cured the problem for me.
36. Broadcast dirt, sand ashes (wood not coal) on snow to hasten melting in the spring - it really helps.